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PTO/SB/08A (08-00)

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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	Unassigned
		Filing Date	Filed Herewith
		First Named Inventor	Hui WANG
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
Sheet 1	of 2	Attorney Docket Number	ACMR-001/03US

11/02/01  
 09/03/91  
 04/16/01

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
W	P1	4,304,641		Granadia et al.	12-08-1981	
W	P2	5,222,310		Thompson et al.	06-29-1993	
W	P3	5,377,708		Bergman et al.	01-03-1995	
W	P4	5,421,987		Tzanavaras et al.	06-06-1995	
W	P5	5,443,707		Mori	08-22-1995	
W	P6	5,489,341		Bergman et al.	02-06-1996	
W	P7	5,516,412		Andricacos et al.	05-14-1996	
W	P8	5,584,310		Bergman et al.	12-17-1996	
W	P9	5,620,581		Ang	04-15-1997	
W	P10	5,670,034		Lowery	09-23-1997	
W	P11	5,678,320		Thompson et al.	10-21-1997	
W	P12	5,744,019		Ang	04-28-1998	

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
W	F1	EP	0 257 670		David Raymond Eastham, et al.	03-02-1988	
W	F2	WO	90/00476		David B. Tuckerman	01-25-1990	
W	F3	WO	95/20064		Edward N. Berg	07-27-1995	

Examiner Signature	William Leader	Date Considered	9/2003
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<sup>1</sup> Unique citation designation number.

<sup>2</sup> See attached Kinds of U.S. Patent Documents.

<sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

<sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

<sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	Unassigned
				Filing Date	Filed Herewith
				First Named Inventor	Hui WANG
				Group Art Unit	Unassigned
Examiner Name	Unassigned				
Sheet	2	of	2	Attorney Docket Number	ACMR-001/03US

1903 U.S. PTO  
 09/03/97  
 04/16/01

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
W2	D1	PATENT ABSTRACT OF JAPAN, "Plating Method," Publication No. 57171690, Publication Date: Oct. 22, 1982	
W2	D2	PATENT ABSTRACT OF JAPAN, "Partial Plating Device," Publication No. 01234590, Publication Date: Sep. 19, 1989	
W2	D3	CONTOLINI et al., "Copper Electroplating Process for Sub-Half-Micron ULSI Structures," <u>VMIC Conference 1995 ISMIC – 104/95/0322</u> , Pgs. 322-328, Jun. 27-29, 1995	
W2	D4	DEVARAJ et al., "Pulsed Electrodeposition of Copper," <u>Plating &amp; Surface Finishing</u> , Pgs. 72-78, Aug. 1992	
W2	D5	DUBIN, "Copper Plating Techniques for ULSI Metallization," <u>Advanced MicroDevices</u>	
W2	D6	DUBIN, V.M., "Electrochemical Deposition of Copper for On-Chip Interconnects," <u>Advanced MicroDevices</u>	
W2	D7	GAUVIN et al., "The Effect of Chloride Ions on Copper Deposition," <u>J. of Electrochemical Society</u> , Vol. 99, Pgs. 71-75, Feb. 1952	
W2	D8	OSERO, N.M., "An Overview of Pulse Plating," <u>Plating and Surface Finishing</u> , Mar. 1986	
W2	D9	PASSAL, F., "Copper Plating During the Last Fifty Years," <u>Plating</u> , Pgs. 628-638, Jun. 1959	
W2	D10	SINGER, P., "Copper Goes Mainstream: Low k to Follow," <u>Semiconductor International</u> , Pgs. 67-70, Nov. 1997	

Examiner Signature	William Leader	Date Considered	9/2003
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Form PTO-1449

# INFORMATION DISCLOSURE IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 495152000111

Application Number 09/837,911

Applicant

Hui WANG

Filing Date April 18, 2001

Group Art Unit 1741

Mailing Date March 7, 2003

## U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
WL	1.	10/31/2000	6,140,234	Uzoh et al.			
WL	2.	1/16/2001	6,174,796 B1	Takagi et al.			
WL	3.	6/26/2001	6,251,528 B1	Uzoh et al.			

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
WL	4.	11/4/1992	4-311591 -	Japan			
WL	5.	8/12/1994	6-224202 -	Japan			
WL	6.	8/3/1993	5-195183 -	Japan			
WL	7.	3/15/1994	6-73598 -	Japan			
WL	8.	8/25/1992	Utility Model 2538705 -	Japan			
WL	9.	8/1/1995	7-197299 -	Japan			
WL	10.	5/2/1995	7-113159 -	Japan			
WL	11.	1/9/1996	8-003153 -	Japan			
WL	12.	1/25/1994	6-017291 -	Japan			
WL	13.	2/9/1999	11-36096 -	Japan			
WL	14.	3/26/1999	11-80993 -	Japan			

## OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title

EXAMINER: William Leader

DATE CONSIDERED: 9/2003

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